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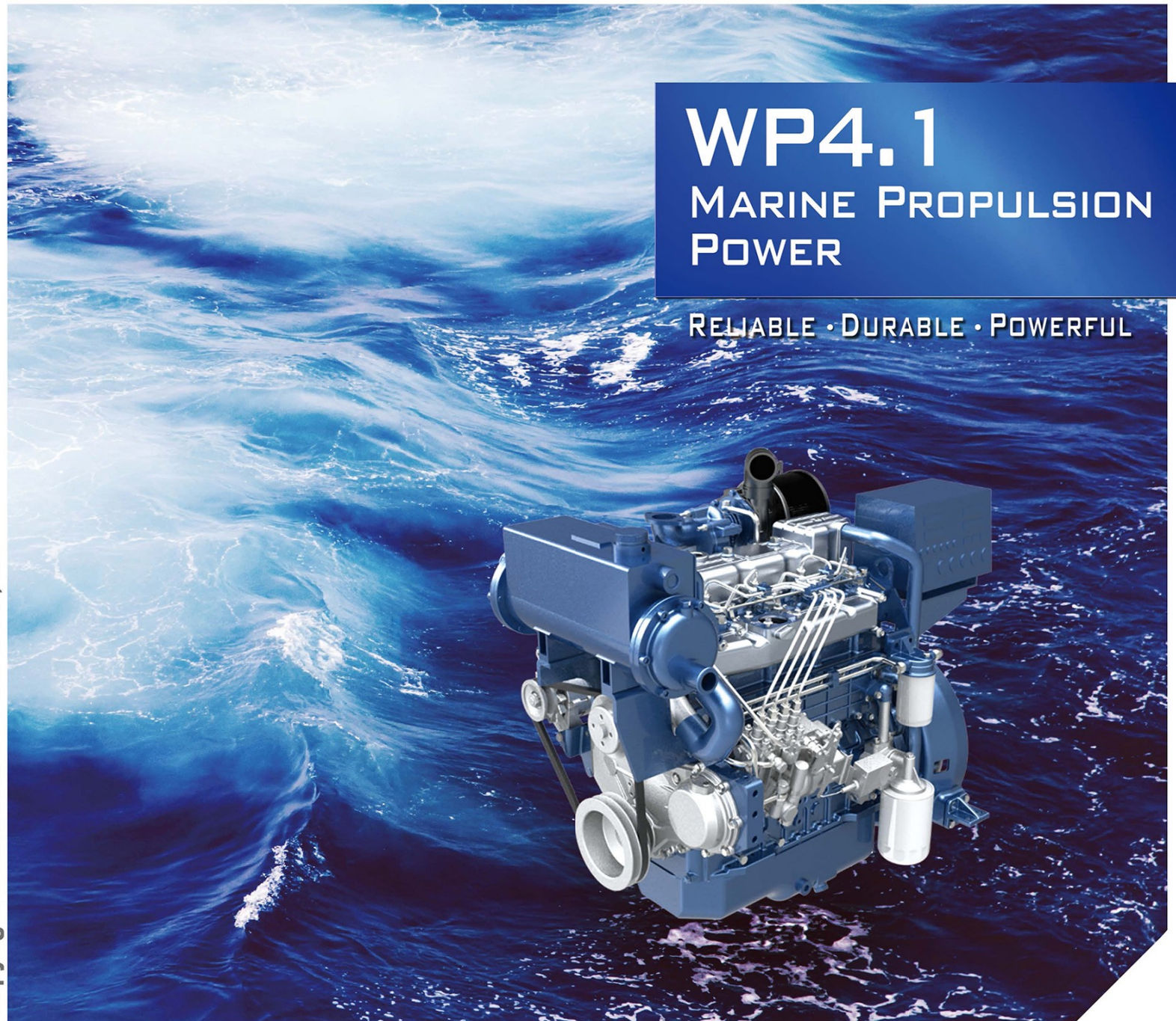
# WP4.1 MARINE PROPULSION POWER

RELIABLE · DURABLE · POWERFUL

Contact your local dealer for more information regarding WEICHAI engine and optional equipment/accessories



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**WEICHAI**

## Power Your Success

### Technical Data

Engine designation	WP4.1C54-15	WP4.1C68-15	WP4.1C82-18
Rated power(Ps/kW)	54/40	68/50	82/60
Speed(r/min)	1500	1500	1800
Power class		P1	
Min. fuel consumption (g/kW.h)		212	
No. of cylinders and configuration		In-line 4	
Description	4-cycle,direct-injected,turbocharged diesel engine		
Bore/Stroke, mm (in.)		105/118(4.1/4.7)	
Displacement, L (in <sup>3</sup> )		4.09(249.6)	
Compression ratio		17:1	
Dry weight bobtail, kg (lb)		400(881.8)	
Emission compliance		IMO Tier II	
Firing order		1-3-4-2	
Direction of revolution (viewed from flywheel end)		Counter clockwise	
Idle speed(r/min)		650±30	
Flywheel housing/SAE size		11.5"/SAE 3	
Recommended fuel to conform to	ASTM-D975:1-D/2-D;DIN51601;NATO CODES F54/F57/F76;GB252 0/-10/-20/-35/-50;BS2869:A1/A2;W-F-800C:DF-A,DF-1,DF-2		

### Class Definition

Rating	Time at full load	Mean engine load factor	Annual working time	Typical applications
P1 Continuous power	Unlimited	70% ~ 100%	> 5000h	Ocean vessel
P2 High speed and heavy duty power	8h per 12h	40% ~ 80%	< 5000h	Ferries, High speed passengers boats, Trawlers, Inland waterway transport boats, Carrier, Offshore trade vessel, Purse seine vessel
P3 Pleasure vessels in commercial operation	4h per 12h	40% ~ 80%	< 3000h	Pleasure vessels in commercial operation and other similar usage habits and life requirements marine
P4 Government	2h per 8h	70% ~ 90%	< 1000h	Fishery patrol ship, Maritime surveillance ship, Patrol boat, Life boat, Assault boat used by local governments
P5 Light duty power	0.5h per 5h	60%	< 500h	Leisure yachts It is restricted to recreational applications. It is not to be used in any revenue-generating commercial applications.

### Power Definition

Standard ISO 3046-1

**Reference conditions**  
Ambient temperature 25 °C / 77 °F  
Barometric pressure 100 kPa  
Relative humidity 30%  
Raw water temperature 25 °C / 77 °F

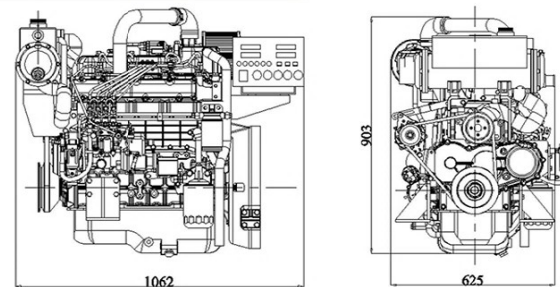
**Fuel oil**  
Relative density 0,840 ± 0,005g/ml  
Lower calorific power 42,700 kJ/kg  
Consumption tolerance 0 ± 5%  
Inlet limit temperature 35 °C / 95 °F

**Our ratings also comply with classification societies maximum temperature definition without power derating.**

Ambient temperature 45 °C / 113 °F  
Raw water temperature 32 °C / 90 °F

## Reliable Durable Powerful

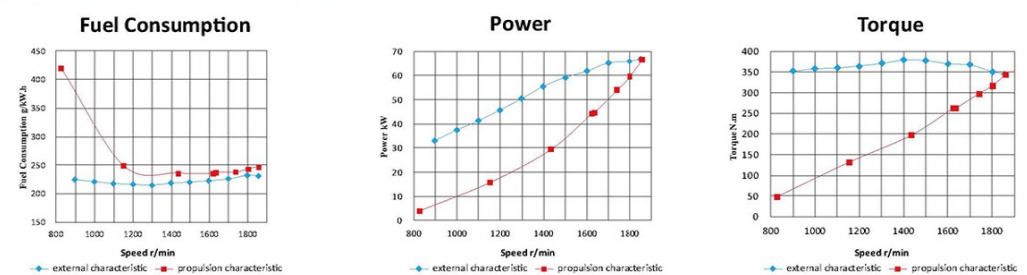
### Engine Dimensions



### Connections

Raw water inlet	Ø 40 mm
Raw water outlet	Ø 40 mm
Fuel inlet	M14×1.5
Fuel outlet	M14×1.5
Exhaust	Ø 50 mm

### Performance Curves(WP4.1C82-18)



### Technical Description

#### Cylinder block

• Engine block casted by HT280 has an enhanced stiffness and lower weight. The block has a concise and beautiful appearance by integrating oil and coolant passages inside.

#### Crankshaft

• Unitary and all balanced crankshaft using high strength nodular cast. It has high fatigue strength and good wear resistance after strong toughening and ion nitriding treatment.

#### Piston

• There are three piston rings on the head of the piston, the top of which is provided with a escape pit and a built-in cooling oil chamber, and the bottom of which is provided with fuel inlet and outlet holes.

#### Connecting rod

• The connecting rod is made of 40Cr, the big end of the connecting rod is in the form of flat cut, I-shaped rod body, simple structure and good reliability.

#### Cylinder head

•The engine use integral cylinder head, easy to manufacture.

#### Intake & Exhaust system

•The engine has good performance and lower emissions because of a well-matched turbocharger.

#### Lubrication system

•The efficient oil filter cleans the oil through the whole running time to effectively extend the oil change interval and keep a good lubrication.

